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EXPERT FILE REVIEW AND ANALYSIS REPORT

EFI Global File No.: 026.01915
May 19, 2021

Vehicle Fire

United States v. Jackson Patton
200 East 400 South
Salt Lake City, UT 84101

Date of Loss: May 30, 2020
Case No. 2:20-cr-00182-DBB

Prepared For:

Office of the Federal Public Defender

Attn: Wojciech Nitecki
46 West Broadway, Suite 10
Salt Lake City, UT 84101

Insured: United States v. Jackson Patton
EFI Global File #: 026.01915

ASSIGNMENT

EFI Global Inc. (EFI) received this assignment on January 14, 2021 from Wojciech Nitecki with the Office of the Federal Public Defender, to review file information regarding the alleged arson of a patrol car that occurred at 200 East 400 South, Salt Lake City, UT 84101.

The scope of this assignment and subsequent instructions were to:

- Review the government's report and photographic and video evidence of the alleged arson of a patrol car.
- Prepare a report of the investigation.

SUMMARY OF CONCLUSIONS

- A peaceful protest over the death of George Floyd was held on May 30, 2020 in downtown Salt Lake City, UT. The protest became violent and destructive.

- A 2010 Chevrolet Impala, Vehicle Identification Number 2G1WD5EM5A114042, with Salt Lake City Police markings was parked at the side of 400 South and was pushed onto the driver's side, then onto its top. Several people ripped parts from the vehicle, removed contents from the vehicle, broke windows, and spray-painted graffiti on it.

- Unidentified males ignited a white material with a cigarette lighter and threw it into the driver's side rear window. A short time later, Mr. Jackson Patton rearranged the material into a pile and pushed more of the material into the vehicle. A small fire was already burning inside the vehicle at the time.

- Mr. Patton poured some brown liquid from a Glidden's paint can, then threw the can into the vehicle. After a few seconds, the fire's intensity decreased. After Mr. Patton walked away, another individual threw a rolled up poster inside the vehicle. Another individual later threw an item of clothing inside the vehicle. There was no evidence the substance in the paint can was an ignitable liquid. There was no evidence of an ignitable liquid used during the fire.

- Despite the perception of some of the individuals on video stating "It's going to blow", there was no evidence of the vehicle exploding. Burning vehicles rarely explode. A fire will decrease in intensity as available fuels are consumed. The fuels available to burn in a vehicle include the interior materials, tires, and automotive fluids.

BACKGROUND

A peaceful protest over the death of George Floyd was held in downtown Salt Lake City, UT on May 30, 2020. The protest became violent and multiple acts of vandalism and fire setting occurred. Videos were recorded by individuals with cell phones, media outlets, and undercover law enforcement officers.

During the incident, a 2010 Chevrolet Impala 4 door sedan, Vehicle Identification Number 2G1WD5EM5A1149042, with Salt Lake City Police markings, was parked, facing east at the curb on 400 South. Several people pushed the vehicle onto the driver's side and light smoke was observed coming from the passenger compartment. The vehicle

was then pushed onto its top, parts were ripped off the vehicle, windows were broken, and graffiti was painted on the vehicle. The vehicle was set on fire using a cigarette lighter to ignite an unknown white combustible material. Additional combustible materials were thrown into the vehicle by various individuals to add to the fuel load.

Due to the civil unrest, the fire department was not dispatched to the scene and the vehicle was allowed to burn itself out. The vehicle was towed to the police department impound yard at approximately 11:00 PM. The origin and cause investigation began on May 31, 2020.

PROCEDURES

The assignment was conducted utilizing a systematic approach identified as the scientific method. The scientific method is a principle of inquiry that forms a basis for legitimate scientific and engineering processes. The scientific method is the recommended methodology provided by the National Fire Protection Association 921, Guide for Fire and Explosion Investigations, 2021 Edition.

1. On January 15, 2021, a review of photographs and videos obtained during the incident and investigation and written reports by ATF Special Agent Tyler Olson was initiated.
2. Research was conducted through www.wunderground.com for weather at the time of the incident and information from Glidden Paint.
3. An email was received from Wojciech Nitecki on April 13, 2021, requesting a written report be provided.

DATA COLLECTION

File Review Observations

A 2010 Chevrolet Impala, Vehicle Identification Number 2G1WD5EM5A114042, with Salt Lake City Police markings was parked, facing east, at the curb on 400 South. Several people pushed the vehicle onto the driver's side at approximately 2:59 PM. At approximately 3:01 PM, light smoke was observed from the interior of the vehicle. The vehicle was pushed onto its top at approximately 3:05 PM and exhaust vapors were emitting from the exhaust pipes. The fuel door was open, and the gas cap was hanging by its lanyard. No fuel was observed dripping from the fuel inlet. Numerous individuals broke the windows on the vehicle, ripped parts from the vehicle, and sprayed painted graffiti on it. Numerous people also climbed onto the vehicle. At approximately 3:30 PM, two unidentified males ignited a white material with a cigarette lighter and threw it into the driver's side rear window. Approximately 30 seconds after the burning material was thrown into the window, Mr. Patton rearranged the material into a pile and pushed more of the material inside the vehicle. A small amount of fire was burning inside the vehicle at the time the material was moved. The white material continued to burn, and Mr. Patton poured a brown liquid from a gallon can onto the material, then threw the can into the vehicle. In a short time the fire burning on the white material had decreased in intensity and another individual tossed a traffic cone next to the vehicle. Several minutes later, the fire in the vehicle had increased in intensity and two traffic cones were next to the vehicle. After the vehicle was flipped onto its top and while the engine was running, several people are heard to state, "It's going to blow!" There was no indication of an explosion occurring involving the vehicle. Numerous individuals were observed in video footage to pose by the vehicle and take "selfies." An unidentified individual threw a firework toward the vehicle. The firework exploded on the ground in front of the vehicle.

On June 2, 2020, ATF SA Tyler Olson had responded to the Salt Lake Police Department following Mr. Patton's arrest. At the time of his arrest, samples of a brown liquid from a container belonging to Mr. Patton, and other items were retained as evidence. Three drops of the brown liquid were placed in a clean can and a discrimination line was set up with two additional cans. A Salt Lake City Fire Department Accelerant Detection Canine was deployed along the discrimination line and alerted on the can containing the brown liquid. The sample was submitted to an ATF lab for analysis. The lab report stated the substance was ethanol (ethyl alcohol), an ignitable liquid. The lab report also stated ethanol is a solvent, used in alcoholic beverages, and as a gasoline additive. The lab report stated the substance did not burn when exposed to an open flame.

Weather Information

Weather data on the date of the fire was obtained from www.wunderground.com at the Salt Lake City International Airport. The weather at 2:54 PM on May 30, 2020 was 95^{o} Fahrenheit, 13% humidity, variable wind direction at 3 mph, and mostly cloudy.

ANALYSIS

Fire Origin Analysis

As fire develops within a vehicle compartment, the production of heat and smoke create various fire effects, including melting of plastics and metals with low temperature melting points; consumption of plastics, upholstery, and rubber materials; smoke deposition, oxidation damage on metal components and exterior body panels, and others[1]. These effects create recognizable patterns that are utilized with fire dynamics to identify the spread of fire throughout a vehicle.

The fire originated in the rear of the passenger compartment of the vehicle after it was pushed onto its top. The vehicle was vandalized by several people. The fire occurred when burning material was placed in or near the broken window in the driver's side rear door.

Fire Cause Analysis

Consideration was given for potential sources of ignition that can be destroyed by the fire or removed from the scene, such as from a match or lighter introduced via human action[2]. The introduction of a heat source, such as an open flame to combustible and/or flammable materials to intentionally ignite a fire was identified as a hypothesis for this fire's ignition sequence[3]. In consideration of all other data and analysis of all other potential ignition sequences, this hypothesis was identified as the only ignition scenario uniquely consistent with the data.

Unidentified individuals were observed igniting a white material with a cigarette lighter and throwing it into or near the broken window in the driver's side rear door. A short time later, Mr. Patton was observed pulling the material back from the window slightly and putting it into a pile. At the time he moved the material, a small fire

[1] NFPA 921 Guide for Fire and Explosion Investigations, 2021 edition, §26.8
[2] NFPA 921 Guide for Fire and Explosion Investigations, 2021 edition, §19.5.2
[3] NFPA 921 Guide for Fire and Explosion Investigations, 2021 edition, §19.4.4.3

was burning inside the vehicle. Several seconds passed before the pile of white material began to burn more freely. Mr. Patton picked up a one-gallon Glidden's paint can from the street and threw some liquid from inside the can onto the white material. He then threw the paint can into the vehicle. The fire decreased in intensity a short time later. After Mr. Patton walked away, another individual threw a rolled up poster into the vehicle. Another individual threw a piece of clothing into the vehicle. Another individual threw a traffic cone toward the vehicle. After several minutes, the fire's intensity grew. Mr. Patton was not observed near the vehicle when the fire's intensity increased.

There was not any evidence of an ignitable being used during the fire.

Due to the civil unrest, there was no effort to extinguish the fire.

RECOMMENDATIONS

EFI Global's file is now closed with no further recommendations at this time.

LIMITATIONS

Our services were performed in the manner defined in the Assignment section of this report. The opinions contained within this report were limited to the circumstances associated with this loss, and are based on the expert's education, experience and training. Should additional information or evidence become known, the author reserves the right to supplement the report as necessary. Any re-use of this report or the findings, conclusions, or recommendations presented herein without the express permission of EFI Global, Inc. is prohibited.

Technical Review by:

Gary S. Hodson, IAAI-CFI(V)
Senior Fire Investigator

Christina Vander Berg, CFEI, CVFI, CFII
Fire Investigator Team Lead

Insured: United States v. Jackson Patton
EFI Global File #: 026.01915

ATTACHMENTS

1. 12 Captioned Images
2. Weather Report
3. Safety Data sheet

Image 1: Vehicle shortly after being pushed onto its top. Screenshot from video obtained by defense.

Image 2: Male individual in black hooded sweatshirt holding burning material. Screenshot from Juniper Toxic video.

Image 3: Male individual wearing plaid shirt holding lighter used to ignite material. Screenshot from Juniper Toxic video.

Image 4: Burning material at driver's side rear window. Screenshot from Juniper Toxic video.

Image 5: Burning material and individual spray-painting side of vehicle. Screenshot from Juniper Toxic video.

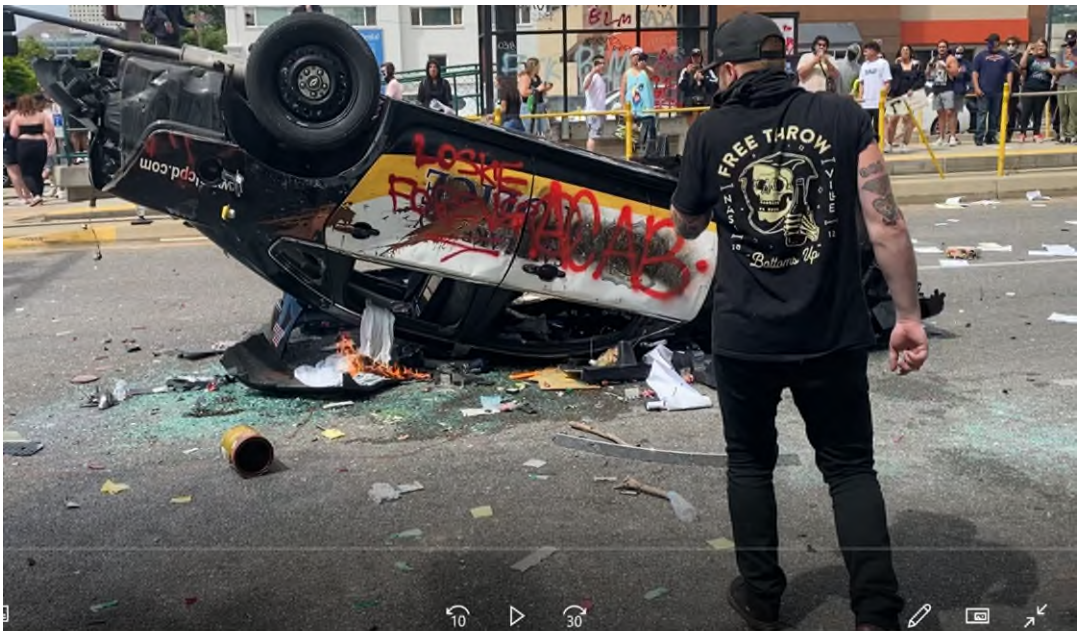


Image 6: Mr. Patton observing burning material. Screenshot from Juniper Toxic video.

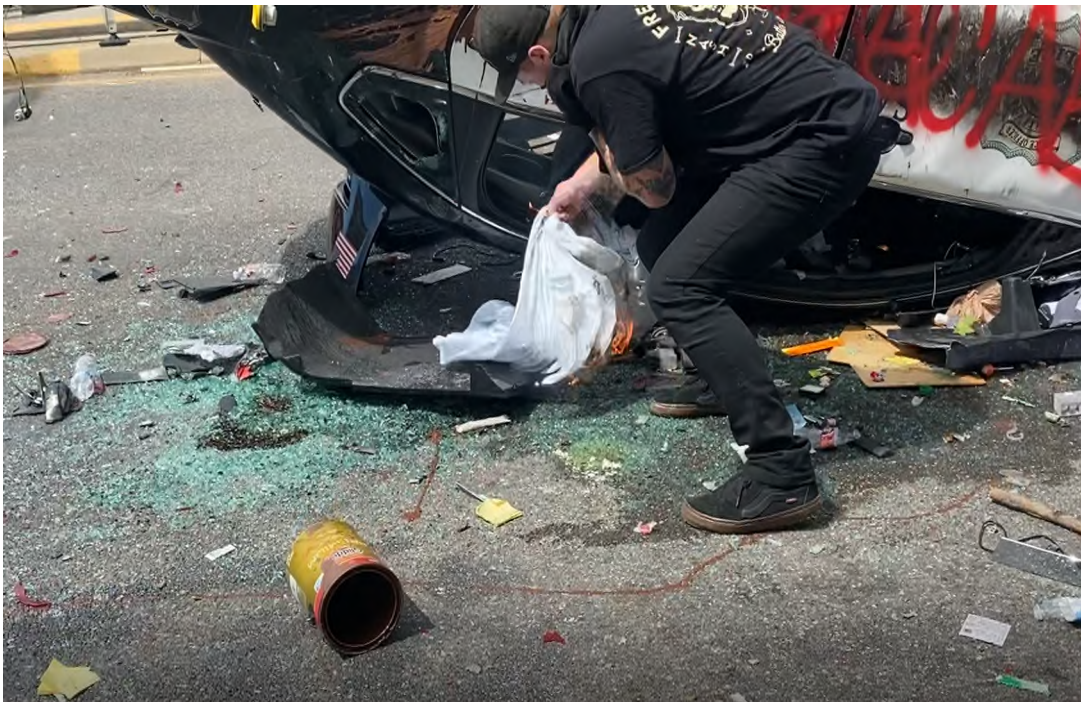


Image 7: Mr. Patton moving and piling burning material with a small amount of flames inside vehicle. Screenshot from Juniper Toxic video.

Image 8: White material after being moved with a small amount of flames inside vehicle. Screenshot from Juniper Toxic video.

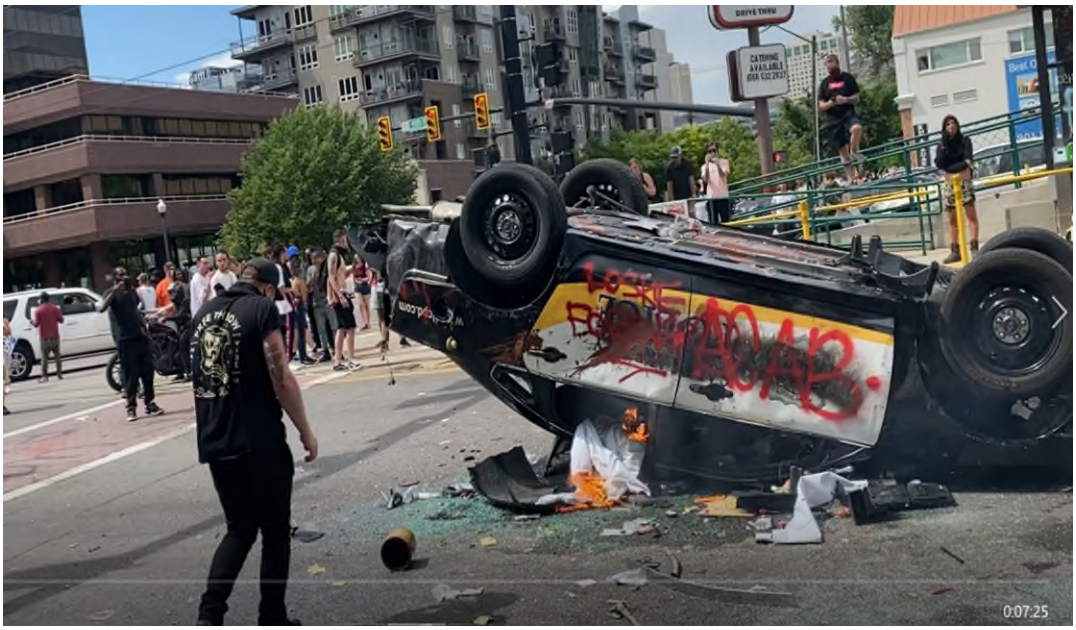


Image 9: Burning material outside and inside vehicle. Screenshot from Juniper Toxic video.

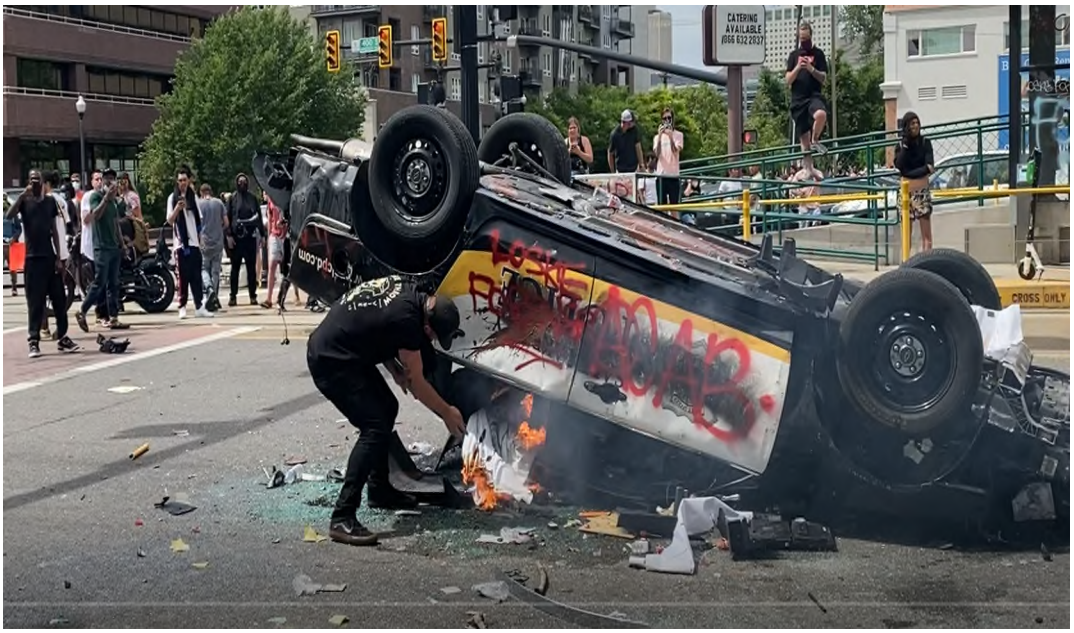


Image 10: Mr. Patton pouring brown material onto burning material. Screenshot from Juniper Toxic video.

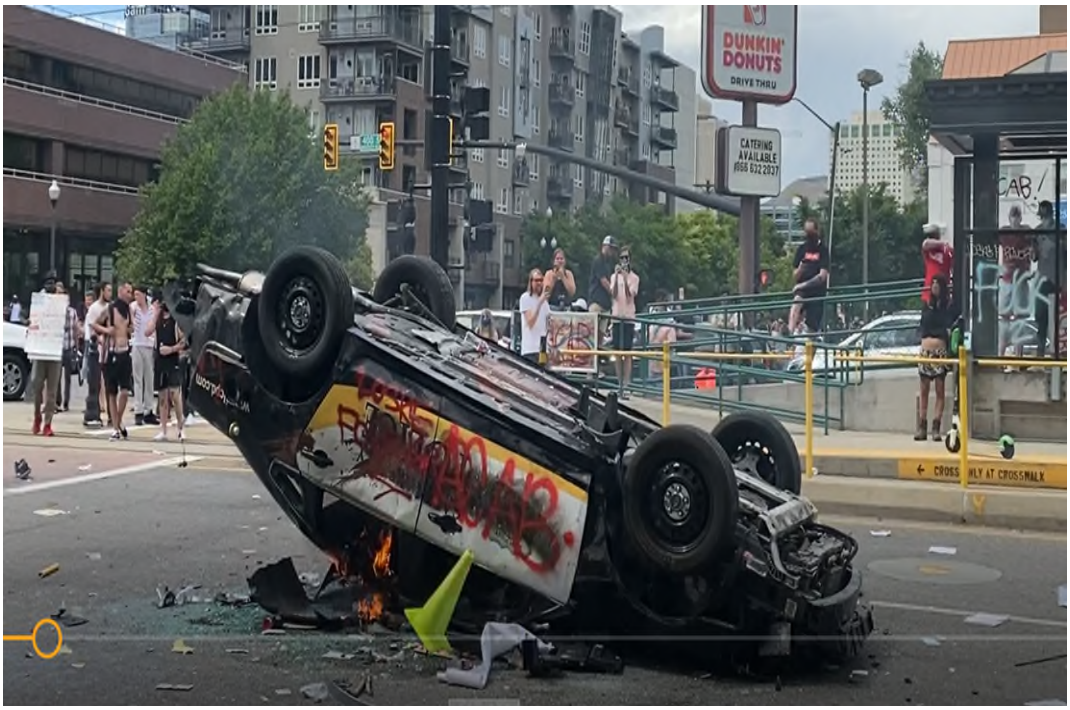


Image 11: Burning material in and near vehicle. Traffic cone thrown next to vehicle by an individual. Screenshot from video from Giovanni.

Image 12: Increased intensity of fire and additional traffic cone thrown next to vehicle.

Attachment 2

Search Locations

Log in (Log...

Recent Cities
Salt Lake City, UT (weather/us/ut/salt-lake-city/40.78,-111.90)

40.8 °N, 111.95 °W

Salt Lake City, UT Weather History

36° SALT LAKE CITY INTERNATIONAL AIRPORT STATION (/WEATHER/KSLC?CM_VEN=LOCALWX_PWSDASH) | CHANGE

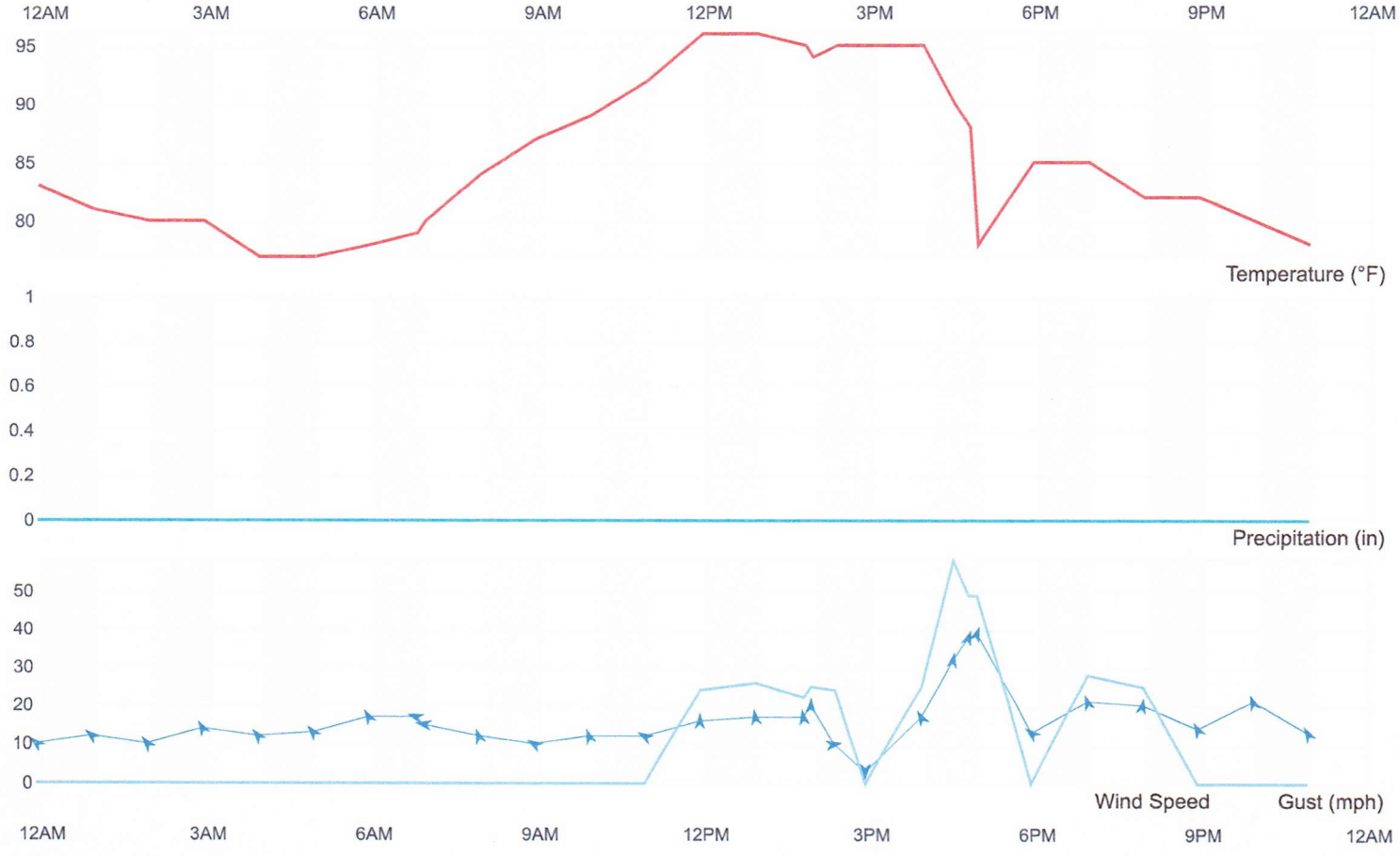
HISTORY (/HISTORY/DAILY/US/UT/SALT-LAKE-CITY/KSLC)

- TODAY (/WEATHER/KSLC)
- HOURLY (/HOURLY/KSLC)
- 10-DAY (/FORECAST/KSLC)
- CALENDAR (/CALENDAR/US/UT/SALT-LAKE-CITY/KSLC)
- HISTORY (/HISTORY/DAILY/US/UT/SALT-LAKE-CITY/KSLC)
- WUNDERMAP (/WUNDERMAP?LAT=40.797&LON=-111.947)

Daily Weekly Monthly

(/history/daily/KSLC/date/2020-5-30) (/history/daily/KSLC/date/2020-5-30) (/history/daily/KSLC/date/2020-5)

May 30 2020 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	96	77	99
Low Temp	77	52	34
Day Average Temp	85.55	64	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 06:54:00)	0.00	0.06	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	41.69	-	-
High	49	-	-
Low	35	-	-
Average	41.69	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	39	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	25.7	-	-
Astronomy	Day Length	Rise	Set
Actual Time	14h 52m	6:00 AM	8:53 PM
Civil Twilight		5:28 AM	9:25 PM
Nautical Twilight		4:46 AM	10:06 PM
Astronomical Twilight		3:59 AM	10:54 PM
Moon: waxing gibbous		12:48 PM	1:37 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
11:54 PM	83 °F	42 °F	24 %	SE	10 mph	0 mph	25.66 in	0.0 in	Mostly Cloudy
12:54 AM	81 °F	42 °F	25 %	SE	12 mph	0 mph	25.67 in	0.0 in	Mostly Cloudy
1:54 AM	80 °F	43 °F	27 %	SE	10 mph	0 mph	25.67 in	0.0 in	Mostly Cloudy
2:54 AM	80 °F	44 °F	28 %	SSE	14 mph	0 mph	25.66 in	0.0 in	Partly Cloudy
3:54 AM	77 °F	44 °F	31 %	SE	12 mph	0 mph	25.67 in	0.0 in	Partly Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
4:54 AM	77 °F	45 °F	32 %	SE	13 mph	0 mph	25.68 in	0.0 in	Mostly Cloudy
5:54 AM	78 °F	45 °F	31 %	SSE	17 mph	0 mph	25.70 in	0.0 in	Mostly Cloudy
6:45 AM	79 °F	43 °F	28 %	ESE	17 mph	0 mph	25.69 in	0.0 in	Mostly Cloudy
6:54 AM	80 °F	42 °F	26 %	E	15 mph	0 mph	25.69 in	0.0 in	Mostly Cloudy
7:54 AM	84 °F	43 °F	24 %	SSE	12 mph	0 mph	25.70 in	0.0 in	Mostly Cloudy
8:54 AM	87 °F	44 °F	22 %	ESE	10 mph	0 mph	25.68 in	0.0 in	Mostly Cloudy
9:54 AM	89 °F	43 °F	20 %	SSE	12 mph	0 mph	25.67 in	0.0 in	Mostly Cloudy
10:54 AM	92 °F	44 °F	19 %	ESE	12 mph	0 mph	25.65 in	0.0 in	Mostly Cloudy
11:54 AM	96 °F	38 °F	13 %	S	16 mph	24 mph	25.62 in	0.0 in	Mostly Cloudy
12:54 PM	96 °F	35 °F	12 %	S	17 mph	26 mph	25.59 in	0.0 in	Mostly Cloudy
1:46 PM	95 °F	36 °F	13 %	S	17 mph	22 mph	25.57 in	0.0 in	Thunder
1:54 PM	94 °F	36 °F	13 %	S	20 mph	25 mph	25.58 in	0.0 in	Thunder
2:20 PM	95 °F	37 °F	13 %	W	10 mph	24 mph	25.57 in	0.0 in	Mostly Cloudy
2:54 PM	95 °F	37 °F	13 %	VAR	3 mph	0 mph	25.56 in	0.0 in	Mostly Cloudy
3:54 PM	95 °F	37 °F	13 %	SSE	17 mph	25 mph	25.53 in	0.0 in	Mostly Cloudy
4:28 PM	90 °F	39 °F	17 %	S	32 mph	58 mph	25.54 in	0.0 in	Light Rain / Windy
4:45 PM	88 °F	41 °F	19 %	SSW	38 mph	49 mph	25.57 in	0.0 in	Light Rain / Windy
4:54 PM	78 °F	49 °F	36 %	SSW	39 mph	49 mph	25.58 in	0.0 in	Light Rain / Windy
5:54 PM	85 °F	46 °F	26 %	SE	13 mph	0 mph	25.54 in	0.0 in	Cloudy
6:54 PM	85 °F	41 °F	21 %	SSE	21 mph	28 mph	25.57 in	0.0 in	Mostly Cloudy / Windy
7:54 PM	82 °F	43 °F	25 %	S	20 mph	25 mph	25.58 in	0.0 in	Mostly Cloudy
8:54 PM	82 °F	42 °F	24 %	SSE	14 mph	0 mph	25.55 in	0.0 in	Mostly Cloudy
9:54 PM	80 °F	43 °F	27 %	SSE	21 mph	0 mph	25.57 in	0.0 in	Mostly Cloudy / Windy
10:54 PM	78 °F	45 °F	31 %	SSE	13 mph	0 mph	25.57 in	0.0 in	Mostly Cloudy

SAFETY DATA SHEET

Date of issue/Date of revision 12 April 2020

Attachment 3

Version 11.02

Section 1. Identification

Product name	:	GL6113 GLIDDEN PREMIUM EXTERIOR ACRYLIC FLAT BASE 3
Product code	:	00409266
Other means of identification	:	Not available.
Product type	:	Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Product use	:	Consumer applications, Professional applications.
Use of the substance/ mixture	:	Coating.
Uses advised against	:	Not applicable.

Manufacturer	:	PPG Industries, Inc. One PPG Place Pittsburgh, PA 15272
Emergency telephone number	:	(412) 434-4515 (U.S.) (514) 645-1320 (Canada) 01-800-00-21-400 or + 52 55 5559 1588 (Mexico)
Technical Phone Number	:	1-800-441-9695 (8:00 am to 5:00 pm EST)

Section 2. Hazards identification

OSHA/HCS status	:	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Classification of the substance or mixture	:	Not classified. Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 21% (Oral), 21% (Dermal), 21% (Inhalation)

GHS label elements

Signal word	:	No signal word.
Hazard statements	:	No known significant effects or critical hazards.

Precautionary statements

General	:	Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	:	Not applicable.
Response	:	Not applicable.

Section 2. Hazards identification

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : Contains isothiazolinones. May cause allergic reaction. Emits toxic fumes when heated.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Product name : GL6113 GLIDDEN PREMIUM EXTERIOR ACRYLIC FLAT BASE 3

Ingredient name	%	CAS number
Diatomaceous earth	≥1.0 - ≤5.0	61790-53-2

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

Eye contact : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Section 4. First aid measures

Skin contact : No specific data.
Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments : No specific treatment.
Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products : Decomposition products may include the following materials:
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Special precautions : If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Do not store below the following temperature: 5°C (41°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Diatomaceous earth	**OSHA PEL Z3 (United States, 6/2016).** TWA: 20 mppcf 8 hours. TWA: 80 mg/m³ / (%SiO2) 8 hours.

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29 CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

Section 8. Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety glasses with side shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Various

Odor : Characteristic.

Odor threshold : Not available.

pH : 9.3

Melting point : Not available.

Boiling point : 100°C (212°F)

Section 9. Physical and chemical properties

Flash point	:	Closed cup: Not applicable. [Product does not sustain combustion.]
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Evaporation rate	:	0.05 (butyl acetate = 1)
Vapor pressure	:	3.3 kPa (25 mm Hg) [room temperature]
Vapor density	:	Not available.
Relative density	:	1.3
Density (lbs / gal)	:	10.85
Solubility	:	Soluble in the following materials: cold water.
Partition coefficient: n-octanol/water	:	Not available.
Viscosity	:	Kinematic (40°C (104°F)): >0.21 cm^2/s (>21 cSt)
Volatility	:	59% (v/v), 45.131% (w/w)
% Solid. (w/w)	:	54.869

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
Incompatible materials	:	Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products	:	Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Conclusion/Summary	:	There are no data available on the mixture itself.

Irritation/Corrosion

Conclusion/Summary

Skin	:	There are no data available on the mixture itself.

Section 11. Toxicological information

Eyes : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Sensitization

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Classification

Product/ingredient name	OSHA	IARC	NTP
Diatomaceous earth	-	3	-

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4
NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen
OSHA: +
Not listed/not regulated: -

Reproductive toxicity

Conclusion/Summary : There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Target organs : Contains material which may cause damage to the following organs: upper respiratory tract, eyes.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Conclusion/Summary : There are no data available on the mixture itself. Contains isothiazolinones. May cause allergic reaction. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Short term exposure

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Long term exposure

Potential immediate effects : There are no data available on the mixture itself.

Potential delayed effects : There are no data available on the mixture itself.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class (es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

DOT : None identified.

IMDG : None identified.

IATA : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

United States

United States inventory (TSCA 8b) : All components are listed or exempted.

SARA 302/304

SARA 304 RQ : Not applicable.

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 1 **Flammability** : 0 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on MSDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Health : 1 **Flammability** : 0 **Instability** : 0

Date of previous issue : **5/3/2019**

Organization that prepared the MSDS : EHS

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Indicates information that has changed from previously issued version.

Section 16. Other information

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.